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Cowan, David
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<120> Nucleic Acids Encoding Proteins Involved in Sensory Transduction

<130> 02307E-084210US

<140> US 09/361,630
<141> 1999-07-27

<150> US 60/094,464
<151> 1998-07-28

<160> 24

<170> PatentIn Ver. 2.0

<210> 1
<211> 388
<212> PRT
<213> Rattus sp.

<220>
<223> rat taste cell polypeptide (TCP) #1 amino acid sequence

<400> 1

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Met Ile Arg His Glu Gln Ser Leu Val Gly Gly Ser Gln Ala Pro Leu
 1               5                  10                  15

Gly Leu Leu Leu Ile Cys Leu Gly Leu Pro Gly Leu Phe Ala Arg Ser
            20                  25                  30

Ile Gly Ala Pro Glu Glu Lys Val Ser Pro His Ser Gly Gln Pro Ser
        35                  40                  45

Phe Thr Ser Leu Leu Asn Ser Gly Gln Pro Gln Pro Lys Pro Asp Ser
    50                  55                  60

Val Asn Asn Glu Leu Pro Gly Val Leu Pro Arg Leu Ser Glu Ser Pro
65                  70                  75                  80

Gln Asp Gly Ser Leu Pro Lys Gly Gly Ser Glu Val Pro Gly Gly Pro
                85                  90                  95

Pro Phe Trp Gly Arg Pro Pro Phe Trp Gly Pro Pro Pro Met Glu Ser
            100                 105                 110

Trp Pro Ser Glu Asp Pro Gln Gln Gly Met Phe Ala Asp Ala Glu Asp
        115                 120                 125

His Leu Glu Pro Val Leu Pro Glu Ala Leu Ser Tyr Leu Ser Arg Asp
    130                 135                 140
```

Ser Pro Leu Pro Glu Ala Ser Ser Ala His Val Lys Gln Pro Ser Pro
145 150 155 160

Glu Ala Ser Tyr Pro Leu Asp Thr Glu Pro Glu Pro Gln Pro Gly Ser
165 170 175

Arg Ser Leu Glu Thr Glu Ala Glu Ala Phe Ala Arg Ser Pro Phe Trp
180 185 190

Phe Leu Val His Lys Leu Leu Pro Gly Val Ser Gly Arg Ile Leu Asn
195 200 205

Pro Gly Thr Ser Trp Gly Ser Gly Gly Ala Gly Thr Gly Trp Gly Thr
210 215 220

Arg Pro Met Pro Tyr Pro Ser Gly Ile Trp Gly Ser Asn Gly Leu Val
225 230 235 240

Ser Gly Thr Ser Leu Val Gly Asn Gly Arg Tyr Pro Ala Gly Ile Trp
245 250 255

Gly Gly Asn Gly Arg Tyr Pro Val Gly Ile Trp Gly Gly Ser Gly Arg
260 265 270

Tyr Pro Ala Gly Ile Trp Gly Gly Ser Gly Arg Tyr Pro Ala Gly Ile
275 280 285

Trp Gly Gly Asn Gly Arg Tyr Pro Val Gly Ser Trp Gly Gly Asn Gly
290 295 300

Arg Tyr Pro Val Gly Ser Trp Gly Gly Ile Gly Arg Tyr Pro Val Gly
305 310 315 320

Asn Trp Gly Gly Asn Gly Gln Tyr Pro Ala Gly Ser Trp Gly Ser Asn
325 330 335

Gly Arg Tyr Pro Ala Gly Ser Trp Gly Pro Asn Cys Gln Tyr Pro Ala
340 345 350

Gly Ser Arg Gly Pro Asn Cys Gln Tyr Pro Pro Gly Ser Trp Gly Ala
355 360 365

Lys Gly Gln Lys Arg Leu Pro Pro Gly Val Lys Pro Pro Gly Ser Ser
370 375 380

Gly Gly Ser Pro
385

<210> 2
<211> 349
<212> PRT
<213> Mus sp.

<220>
<223> mouse taste cell polypeptide (TCP) #1 amino acid sequence

<400> 2
Met Gln Ser His Ala Gly Gly Ser Arg Ala Pro Leu Gly Leu Leu Leu
1 5 10 15

Ile Cys Leu Cys Leu Pro Gly Leu Phe Ala Arg Ser Thr Gly Ala Pro
20 25 30

Glu Glu Lys Ala Ser Pro His Ser Gly Gln Pro Ser Phe Thr Ser Leu
35 40 45

Leu Asn Pro Gly Gln Leu Gln Pro Lys Pro Asp Pro Val Asn Asn Glu
50 55 60

Leu Leu Gly Val Leu Pro Arg Leu Ser Glu Ser Pro Gln Asp Gly Ala
65 70 75 80

Leu Pro Glu Gly Gly Ser Glu Val Pro Asn Gly Pro Pro Phe Trp Gly
85 90 95

Pro Pro Pro Met Glu Ser Trp Pro Ser Glu Asp Pro Gln Gln Gly Met
100 105 110

Ala Ala Val Ala Glu Asp Gln Leu Glu Gln Met Leu Pro Glu Ala Leu
115 120 125

Pro Tyr Leu Ser Arg Gly Gly Arg Leu Pro Glu Ala Ser Ser Ala Arg
130 135 140

Leu Arg Gln Pro Ser Pro Ala Ala Ser Tyr Pro Gln Asp Ser Glu Ala
145 150 155 160

Gly Leu Gln Pro Gly Ser Ser Ser Leu Glu Thr Glu Ala Glu Ala Phe
165 170 175

Ala Arg Ser Pro Phe Trp Phe Leu Ile His Lys Leu Leu Pro Gly Ser
180 185 190

Ser Gly Arg Ile Leu Arg Pro Gly Thr Ser Trp Gly Ser Gly Gly Ala
195 200 205

Gly Thr Gly Trp Gly Thr Arg Pro Met Pro Tyr Pro Ser Gly Ile Trp
210 215 220

Gly Ser Asn Gly Leu Val Ser Gly Thr Ser Leu Gly Gly Arg Gly Pro
225 230 235 240

Tyr Pro Val Arg Ile Trp Gly Arg Asn Gly Trp Tyr Pro Leu Arg Ile
245 250 255

Leu Gly Gly Asn Gly Arg Tyr Pro Pro Val Gly Thr Trp Gly Gly Tyr
260 265 270

Gly Gln Tyr Pro Pro Val Gly Thr Trp Gly Gly Tyr Gly Gln Tyr Pro
275 280 285

Pro Val Gly Pro Trp Gly Gly Tyr Gly Gln Tyr Pro Pro Val Gly Thr
290 295 300

Trp Gly Ala Asn Cys Gln Tyr Pro Ala Gly Ser Arg Arg Pro Asn Cys
305 310 315 320

Arg Tyr Pro Ala Gly Ser Trp Gly Thr Lys Gly Gln Asn Arg Leu Pro
325 330 335

Pro Gly Ala Lys Arg Pro Gly Ser Ser Gly Ile Thr Pro
340 345

<210> 3
<211> 731
<212> PRT
<213> Rattus sp.

<220>
<223> rat taste cell polypeptide (TCP) #2 amino acid sequence

<400> 3
Met Asp Lys Gln Gln Phe Pro Ala Ala Gly Ile Leu Leu Ala Ala Phe
1 5 10 15

Leu Val Val Ser Ala Ser Thr Leu Thr Leu Leu Ser Thr Asn Gly Asp
20 25 30

Pro Asp Gln Phe Pro Ser Asp Pro Gly Thr Ser Ala Gln Gln Ser Asn
35 40 45

Asn Ile Leu Leu Gly Ile Leu Thr Asp Asn Thr Gly Ser Ile Asn Ser
50 55 60

Thr Glu Arg Glu Ser Glu Ala Leu Gly Arg Arg Ala Gly Ala Phe Ser
65 70 75 80

Thr Glu Gly Ala Gly Gly Gln Glu Ser Pro Pro Met Pro Gly Pro Ser
85 90 95

Gly Thr Val Thr Pro Glu Pro Ile Arg Ser Ala Leu Thr Thr Ser Ala
100 105 110

Ala Tyr Met Ala Ala Asp Ser Gln Pro Val Ser Pro Glu Ala Glu Pro
115 120 125

Val Glu Glu Ile Leu Ala Leu Gly Ile Leu Glu Thr Ile Thr Met Ser
130 135 140

Ser Pro Gln Pro Ser Pro Ile His Gly Ser Glu Pro Lys Phe Lys Lys
145 150 155 160

Ala Phe Arg Pro Pro His Leu Leu Trp His Thr Pro Asn Pro Thr Val
165 170 175

Gln Met Leu Val Pro Ala Trp Arg Asn Gly His Ser Arg Pro Glu Ala
180 185 190

Ser Ser Ser Val Ala Leu Ala Pro Arg Thr Ser Leu Gly Leu Pro Val
195 200 205

Phe Pro Trp Met Pro Asn Ile Leu Lys Ala Thr Glu Pro Leu Leu Pro
210 215 220

Ala Ser Pro Gly Arg Leu Gly Leu Asp Leu Thr Ser Gln Val Gly Ser
225 230 235 240

Gly Ser Phe Glu Asp Thr Gly Pro Val Ser Gly Gly Ala Asn Asp Ser
245 250 255

Pro Gln Pro Pro Val Ser Ala Ile Val Ser Ser Thr Thr Asp Ser Ser
260 265 270

Ile Lys Thr Ser Asn Leu Ala Pro Gln Thr Ala Leu Gln Pro Gln Pro
275 280 285

Pro Gly Pro Trp Phe Pro Pro Ala Gln Ser Ala Cys Pro Pro Ser Leu
290 295 300

Ser Ser Thr Ser Pro Ala Leu Pro Leu Pro His Thr Ala Leu Ala Tyr
305 310 315 320

Thr Glu Ser Ser Val Asp Ala Glu Pro Thr Gln Ala Ser Thr Leu Pro
325 330 335

His Leu Gly Gln Ala Met Ser Leu Gln Asn Leu Ser Phe Ser Thr Pro
340 345 350

Gly Pro Arg His Thr Thr His Ser Val Thr Phe Arg Thr Asn Ser Ser
355 360 365

Cys Phe Arg Ile Val Val Trp Ser Leu Val Pro Leu Glu Cys Trp Leu
370 375 380

Leu Asn Arg Leu Ile Cys Tyr Gln Leu Gln Leu Ile Tyr His Glu Ala
385 390 395 400

Phe Ser Asn Phe Lys Asn Val Ser Ala Leu Leu Phe Arg Pro Gly Ser
405 410 415

Thr Glu Val Lys Ala Ser Leu Val Phe Gly Pro Pro Asp Pro Ser Ala
420 425 430

Leu Glu Ile Leu Trp Thr Leu Tyr Arg Lys Val Lys Ser Ser Arg Trp
435 440 445

Ser Leu Gly Tyr Leu Ser Leu Ala Asp His Gly Leu Ser Ser Asp Gly
450 455 460

Tyr Asn Thr Asn Asp Leu Arg Gln Glu Thr Ile Asn Ile Ser Phe Thr
465 470 475 480

Leu Met Lys Pro Phe Leu Pro Gln Leu Leu Leu Pro Ser Ser Gln Pro
485 490 495

Phe Leu Leu Met Glu Lys Gln Thr Leu Gln Leu Val Thr His Glu Val
500 505 510

Ser Arg Phe Tyr Lys Ala Glu Leu Gln Glu Gln Pro Leu Leu Leu Phe
515 520 525

Ser Asn Val Lys Glu Trp Val Ser Ile Tyr Val Glu Tyr Lys Phe Lys
530 535 540

Ser Pro Ile Pro Asn His Leu Gln Gly Leu Ala Ser His Leu Ala His
545 550 555 560

His Ile Thr Asp Pro Thr Ile Gln Lys Ser Ser Ile Val Ala Asn Gly
565 570 575

1 CONT.

Glu Lys Ala Asp Leu Val Phe Tyr Glu Thr Trp Leu Leu Ile Leu Gly
580 585 590

Tyr Pro Phe Thr Lys Ala Leu Glu Asn Lys Thr Ser Ser Glu Ser Gln
595 600 605

Lys Leu Arg Gly Leu Leu Thr Arg Gln Leu Thr Ser Val Leu Gln Pro
610 615 620

Leu Gln Asn Phe Gly Gln Val Val Val Glu Glu Phe His Gln Glu Pro
625 630 635 640

Leu Thr Ala Arg Val Gln Thr Ala Phe Phe Glu Ala Ala Pro Ala Gln
645 650 655

Ala Val Ile Gln Asp Ser Met Leu Gln Ala Leu Gly Ser Leu Gln Glu
660 665 670

Ala Glu Gly Leu Gln Leu Glu Met Leu Leu Pro Val Leu Gly Thr Pro
675 680 685

CONT

Ser Ser Arg Ala Ser Arg Gly Pro Arg Gly Gly Ala Val Leu Asn Leu
690 695 700

Gln Phe Ile Thr Ser Leu Phe Val Leu Val Ala Leu Cys Thr Ala Leu
705 710 715 720

Pro Phe Thr Lys Lys Gln Thr Pro Tyr Leu Phe
725 730

<210> 4
<211> 729
<212> PRT
<213> Mus sp.

<220>
<223> mouse taste cell polypeptide (TCP) #2 amino acid sequence

<400> 4
Met Asp Lys Gln Trp Phe Pro Ala Ala Gly Ile Leu Leu Ala Ala Leu
1 5 10 15

Leu Val Val Ser Ala Ser Thr Leu Thr Leu Leu Ser Thr Asn Glu Asp
20 25 30

Pro Glu Gln Phe Pro Ser Ala Pro Gly Thr Ser Ala Gln Gln Ser Ser
35 40 45

Arg Ile Leu Leu Gly Ile Leu Thr Asp Val Thr Gly Gly Ile Asn Ser
50 55 60

Val Glu Arg Glu Pro Glu Ala Leu Gly Arg Arg Ala Gly Gly Leu Ser
65 70 75 80

Thr Glu Gly Ala Gly Gly Gln Glu Ser Pro Ser Met Pro Gly Pro Ser
85 90 95

Gly Arg Val Ile Pro Glu Pro Ile Pro Ser Ala Leu Thr Thr Ser Ala
100 105 110

Ser Asp Met Ala Ser Gln Pro Val Ser Ser Gly Ala Asp Pro Ile Glu
115 120 125

Glu Ile Met Ala Leu Gly Thr Leu Glu Thr Ile Thr Met Ser Ser Pro
130 135 140

Gln Pro Ser Pro Arg His Glu Ser Glu Gln Lys Phe Asp Lys Val Phe
145 150 155 160

Arg Ser Pro His Leu Leu Trp Cys Thr Pro Asn Ser Thr Val Tyr Ile
165 170 175

Pro Val Pro Ala Trp Arg Asp Gly His Ser Arg Pro Glu Ala Ser Ser
180 185 190

Ser Val Pro Leu Ala Pro Ser Thr Ser Leu Gly Leu Pro Ile Phe Pro
195 200 205

Trp Met Pro Asn Ile Leu Lys Ala Thr Glu Ser Leu Leu Pro Ala Ser
210 215 220

Pro Gly Arg Ser Gly Leu Asp Leu Thr Ser Gln Val Gly Ser Arg Ala
225 230 235 240

Ser Glu Asn Thr Val Ala Leu Asp Thr Gly Pro Val Ser Arg Gly Ala
245 250 255

Ser Asp Ser Pro Gln Thr Thr Pro Ser Thr Thr Asp Ser Phe Ile Lys
260 265 270

Thr Ser Asn Leu Gly Pro Gln Ile Ala Leu Gln Pro Ser His Pro Gly
275 280 285

Leu Trp Leu Pro Thr Ser Pro Ile His Met Pro Thr Leu Ser Leu Gln
290 295 300

His Phe Ser Ser Pro Pro Ser Thr Ala His Ser Ser Gly Phe Thr Glu
305 310 315 320

Ser Ser Val His Ala Asp Pro Thr Leu Ala Ser Thr Leu Pro His Pro
325 330 335

Gly Gln Asp Met Ser Leu Gln Asp Leu Ser Phe Ser Thr Gly Gly Arg
340 345 350

Ser His Thr Thr His Ser Val Thr Phe Arg Ile Asn Ser Asn Arg Phe
355 360 365

Thr Lys Ala Val Trp Asn Leu Val Pro Leu Glu Arg Trp Leu Leu Asn
370 375 380

Arg Leu Ile Cys Tyr Gln Leu Arg Phe Ile Tyr Gln Glu Ala Phe Pro
385 390 395 400

Asn Phe Arg Asn Val Ser Thr Leu Leu Phe Arg Pro Gly Cys Pro Glu
405 410 415

Val Lys Ala Ser Leu Ile Phe Gly Pro Pro Asp Pro Ser Ser Ile Glu
420 425 430

Ile Leu Trp Thr Leu Tyr Arg Lys Val Lys Ser Ser Arg Trp Ser Leu
435 440 445

Gly Tyr Leu Ser Leu Ala Asp His Gly Leu Ser Ser Asp Gly Tyr Ser
450 455 460

Met Thr Asp Leu Thr Gln Glu Ile Ile Asn Ile Ser Phe Thr Leu Met
465 470 475 480

Arg Pro Phe Leu Pro Gln Leu Leu Leu Pro Ser Ser Gln Pro Cys Ile
485 490 495

Leu Leu Glu Lys Gln Thr Ile Gln Leu Val Thr His Glu Val Ser Arg
500 505 510

Phe Tyr Lys Ala Glu Leu Gln Ser Gln Pro Leu Leu Leu Phe Ser Asn
515 520 525

Val Lys Glu Trp Val Ser Val Tyr Met Glu Tyr Lys Phe Lys Ser Pro
530 535 540

Ile Pro Ile Arg Leu Gln Gly Leu Ala Ser His Leu Ala His His Ile
545 550 555 560

Thr Asp Pro Thr Leu Gln Lys Ser Ser Ile Met Ala Asn Gly Glu Lys
565 570 575

Ala Asp Leu Val Phe Tyr Glu Met Trp Leu Leu Ile Leu Gly His Pro
580 585 590

Phe Thr Lys Thr Leu Glu Asn Lys Thr Ser Ser Glu Cys Gln Glu Leu
595 600 605

Arg Gly Leu Leu Thr Arg Gln Leu Thr Ser Val Leu Gln Pro Leu Lys
610 615 620

Asn Phe Gly Gln Val Val Val Glu Glu Phe His Gln Glu Pro Leu Thr
625 630 635 640

Ala Arg Val Gln Thr Ala Phe Phe Gly Ala Val Pro Ala Gln Ala Ile
645 650 655

Ile Gln Asp Thr Val Leu Gln Ala Leu Gly Ser Leu Gln Glu Thr Glu
660 665 670

Gly Leu Gln Leu Glu Met Leu Leu Pro Val Leu Gly Thr Pro Ser Ser
675 680 685

Arg Ala Ser Arg Gly Pro Arg Gly Gly Ala Met Leu Asn Leu Gln Arg
690 695 700

Phe Thr Ser Leu Phe Val Leu Val Ala Leu Cys Thr Ala Pro Pro Phe
705 710 715 720

Ile Asn Lys Gln Ala Leu Tyr Leu Ser
725

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<210> 5
<211> 344
<212> PRT
<213> Rattus sp.

<220>
<223> rat taste cell polypeptide (TCP) #3 amino acid sequence

<400> 5

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Met Asp Arg Phe Arg Met Leu Phe Gln Asn Phe Gln Ser Ser Ser Glu
  1               5                  10                  15

Ser Val Thr Asn Gly Ile Cys Leu Leu Leu Ala Ala Val Thr Val Lys
             20                  25                  30

Met Tyr Ser Ser Leu Asp Phe Asn Cys Pro Cys Leu Glu Arg Tyr Asn
         35                  40                  45

Ala Leu Tyr Gly Leu Gly Leu Leu Leu Thr Pro Pro Leu Ala Leu Phe
     50                  55                  60

Leu Cys Gly Leu Leu Val Asn Arg Gln Ser Val Leu Met Val Glu Glu
 65                  70                  75                  80

Trp Arg Arg Pro Ala Gly His Arg Arg Lys Asp Leu Gly Ile Ile Arg
                 85                  90                  95

Tyr Met Cys Ser Ser Val Leu Gln Arg Ala Leu Ala Ala Pro Leu Val
            100                 105                 110

Trp Ile Leu Leu Ala Leu Leu Asp Gly Lys Cys Leu Val Cys Ala Phe
        115                 120                 125

Ser Asn Ser Val Asp Pro Glu Lys Phe Leu Asp Phe Ala Asn Met Thr
    130                 135                 140

Pro Ser Gln Val Gln Leu Phe Leu Ala Lys Val Pro Cys Lys Glu Asp
145                 150                 155                 160

Glu Leu Val Lys Thr Asn Pro Ala Arg Lys Ala Val Ser Arg Tyr Leu
                165                 170                 175

Arg Cys Leu Ser Gln Ala Ile Gly Trp Ser Ile Thr Leu Leu Val Ile
            180                 185                 190

Val Val Ala Phe Leu Ala Arg Cys Leu Arg Pro Cys Phe Asn Gln Thr
        195                 200                 205

Val Phe Leu Gln Arg Arg Tyr Trp Ser Asn Tyr Met Asp Leu Glu Gln
    210                 215                 220

Lys Leu Phe Asp Glu Thr Cys Cys Glu His Ala Arg Asp Phe Ala His
225                 230                 235                 240

Arg Cys Val Leu His Phe Phe Ala Ser Met Gln Ser Glu Leu Arg Ala
                245                 250                 255

Leu Gly Leu His Arg Asp Pro Ala Gly Glu Ile Leu Glu Ser Gln Glu
            260                 265                 270
```

CONT

```
Pro Pro Glu Pro Pro Glu Glu Pro Gly Ser Glu Ser Gly Lys Ala His
        275                 280                 285

Leu Arg Ala Ile Ser Ser Arg Glu Gln Val Asn His Leu Leu Ser Thr
    290                 295                 300

Trp Tyr Ser Ser Lys Pro Pro Leu Asp Leu Ala Ala Ser Pro Arg Leu
305                 310                 315                 320

Trp Glu Pro Gly Leu Asn His Arg Ala Pro Ile Ala Ala Pro Gly Thr
                325                 330                 335

Lys Leu Gly His Gln Leu Asp Val
            340
```

<210> 6
<211> 347
<212> PRT
<213> Mus sp.

<220>
<223> mouse 1 taste cell polypeptide (TCP) #3 amino acid sequence

<400> 6

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Met Asp Arg Phe Arg Met Leu Phe Gln His Leu Gln Ser Ser Ser Glu
  1                 5                  10                  15

Ser Val Met Asn Gly Ile Cys Leu Leu Leu Ala Ala Val Thr Val Lys
             20                  25                  30

Ile Tyr Ser Ser Leu Asp Phe Asn Cys Pro Cys Leu Glu Arg Tyr Asn
         35                  40                  45

Ala Leu Tyr Gly Leu Gly Leu Leu Leu Thr Pro Pro Leu Ala Leu Phe
     50                  55                  60

Leu Cys Gly Leu Leu Val Asn Arg Gln Ser Val Leu Met Val Glu Glu
 65                  70                  75                  80

Trp Arg Arg Pro Ala Gly His Arg Arg Lys Asp Leu Gly Ile Ile Arg
                85                  90                  95

Tyr Met Cys Ser Ser Val Leu Gln Arg Ala Leu Ala Ala Pro Leu Val
            100                 105                 110

Trp Ile Leu Leu Ala Leu Leu Asp Gly Lys Cys Phe Val Cys Ala Phe
        115                 120                 125

Ser Asn Ser Val Asp Pro Glu Lys Phe Leu Asp Phe Ala Asn Met Thr
    130                 135                 140

Pro Arg Gln Val Gln Leu Phe Leu Ala Lys Val Pro Cys Lys Glu Asp
145                 150                 155                 160

Glu Leu Val Lys Asn Ser Pro Ala Arg Lys Ala Val Ser Arg Tyr Leu
                165                 170                 175

Arg Cys Leu Ser Gln Ala Ile Gly Trp Ser Ile Thr Leu Leu Val Ile
            180                 185                 190
```

Val Val Ala Phe Leu Ala Arg Cys Leu Arg Pro Cys Phe Asp Gln Thr
195 200 205

Val Phe Leu Gln Arg Arg Tyr Trp Ser Asn Tyr Met Asp Leu Glu Gln
210 215 220

Lys Leu Phe Asp Glu Thr Cys Cys Glu His Ala Arg Asp Phe Ala His
225 230 235 240

Arg Cys Val Leu His Phe Phe Ala Asn Met Gln Ser Glu Leu Arg Ala
245 250 255

Leu Gly Leu Arg Arg Asp Pro Ala Gly Gly Ile Pro Glu Ser Gln Glu
260 265 270

Ser Ser Glu Pro Pro Glu Leu Arg Glu Asp Arg Asp Ser Gly Asn Gly
275 280 285

Lys Ala His Leu Arg Ala Ile Ser Ser Arg Glu Gln Val Asp Gln Leu
290 295 300

Leu Ser Thr Trp Tyr Ser Ser Lys Pro Pro Leu Asp Leu Ala Ala Ser
305 310 315 320

Pro Arg Arg Trp Gly Pro Gly Leu Asn His Arg Ala Pro Ile Ala Ala
325 330 335

Pro Gly Thr Lys Leu Cys His Gln Leu Asn Val
340 345

<210> 7
<211> 313
<212> PRT
<213> Mus sp.

<220>
<223> mouse 2 taste cell polypeptide (TCP) #3 amino acid sequence

<400> 7
Met Glu Lys Phe Lys Ala Val Leu Asp Leu Gln Arg Lys His Arg Asn
1 5 10 15

Ala Leu Gly Tyr Ser Leu Val Thr Leu Leu Thr Ala Gly Gly Glu Lys
20 25 30

Ile Phe Ser Ser Val Val Phe Gln Cys Pro Cys Thr Ala Thr Trp Asn
35 40 45

Leu Pro Tyr Gly Leu Val Phe Leu Leu Val Pro Ala Leu Ala Leu Phe
50 55 60

Leu Leu Gly Tyr Ala Leu Ser Ala Arg Thr Trp Arg Leu Leu Thr Gly
65 70 75 80

Cys Cys Ser Arg Ser Ala Arg Phe Ser Ser Gly Leu Arg Ser Ala Phe
85 90 95

Val Cys Ala Gln Leu Ser Met Thr Ala Ala Phe Ala Pro Leu Thr Trp
100 105 110

```
Val Ala Val Ala Leu Leu Glu Gly Ser Phe Tyr Gln Cys Ala Val Ser
        115                 120                 125

Gly Ser Ala Arg Leu Ala Pro Tyr Leu Cys Lys Gly Arg Asp Pro Asn
    130                 135                 140

Cys Asn Ala Thr Leu Pro Gln Ala Pro Cys Asn Lys Gln Lys Val Glu
145                 150                 155                 160

Met Gln Glu Ile Leu Ser Gln Leu Lys Ala Gln Ser Gln Val Phe Gly
                165                 170                 175

Trp Ile Leu Ile Ala Ala Val Ile Ile Leu Leu Leu Leu Val Lys Ser
            180                 185                 190

Val Thr Arg Cys Phe Ser Pro Val Ser Tyr Leu Gln Leu Lys Phe Trp
        195                 200                 205

Glu Ile Tyr Trp Glu Lys Glu Lys Gln Ile Leu Gln Asn Gln Ala Ala
    210                 215                 220

Glu Asn Ala Thr Gln Leu Ala Glu Glu Asn Val Arg Cys Phe Phe Glu
225                 230                 235                 240

Cys Ser Lys Pro Lys Glu Cys Asn Thr Thr Ser Ser Lys Asp Trp Gln
                245                 250                 255

Glu Ile Ser Ala Leu Tyr Thr Phe Asn Pro Lys Asn Gln Phe Tyr Ser
            260                 265                 270

Met Leu His Lys Tyr Val Ser Arg Glu Glu Met Ser Gly Ser Val Arg
        275                 280                 285

Ser Val Glu Gly Asp Ala Val Ile Pro Ala Leu Gly Phe Val Asp Asp
    290                 295                 300

Met Ser Met Thr Asn Thr His Glu Leu
305                 310


<210> 8
<211> 224
<212> PRT
<213> Homo sapiens

<220>
<223> human 1 taste cell polypeptide (TCP) #3 amino acid
      sequence

<400> 8
Phe Leu Leu Leu Ser Ser Ile Leu Gly Arg Ala Ala Val Ala Pro Val
  1               5                  10                  15

Thr Trp Ser Val Ile Ser Leu Leu Arg Gly Glu Ala Tyr Val Cys Ala
             20                  25                  30

Leu Ser Glu Phe Val Asp Pro Ser Ser Leu Thr Ala Arg Glu Glu His
         35                  40                  45

Phe Pro Ser Ala His Ala Thr Glu Ile Leu Ala Arg Phe Pro Cys Lys
     50                  55                  60
```

```
Glu Asn Pro Asp Asn Leu Ser Asp Phe Arg Glu Glu Val Ser Arg Arg
 65                  70                  75                  80

Leu Arg Tyr Glu Ser Gln Leu Phe Gly Trp Leu Leu Ile Gly Val Val
                 85                  90                  95

Ala Ile Leu Val Phe Leu Thr Lys Cys Leu Lys His Tyr Cys Ser Pro
            100                 105                 110

Leu Ser Tyr Arg Gln Glu Ala Tyr Trp Ala Gln Tyr Arg Ala Asn Glu
        115                 120                 125

Asp Gln Leu Phe Gln Arg Thr Ala Glu Val His Ser Arg Val Leu Ala
    130                 135                 140

Ala Asn Asn Val Arg Arg Phe Phe Gly Phe Val Ala Leu Asn Lys Asp
145                 150                 155                 160

Asp Glu Glu Leu Ile Ala Asn Phe Pro Val Glu Gly Thr Gln Pro Arg
                165                 170                 175

Pro Gln Trp Asn Ala Ile Thr Gly Val Tyr Leu Tyr Arg Glu Asn Gln
            180                 185                 190

Gly Leu Pro Leu Tyr Ser Arg Leu His Lys Trp Ala Gln Gly Leu Ala
        195                 200                 205

Gly Asn Gly Ala Ala Pro Asp Asn Val Glu Met Ala Leu Leu Pro Ser
    210                 215                 220
```

<210> 9
<211> 316
<212> PRT
<213> Homo sapiens

<220>
<223> human 2 taste cell polypeptide (TCP) #3 amino acid sequence

<400> 9

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Met Glu Lys Phe Arg Ala Val Leu Asp Leu His Val Lys His His Ser
  1               5                  10                  15

Ala Leu Gly Tyr Gly Leu Val Thr Leu Leu Thr Ala Gly Gly Glu Arg
             20                  25                  30

Ile Phe Ser Ala Val Ala Phe Gln Cys Pro Cys Ser Ala Ala Trp Asn
         35                  40                  45

Leu Pro Tyr Gly Leu Val Phe Leu Leu Val Pro Ala Leu Ala Leu Phe
     50                  55                  60

Leu Leu Gly Tyr Val Leu Ser Ala Arg Thr Trp Arg Leu Leu Thr Gly
 65                  70                  75                  80

Cys Cys Ser Ser Ala Arg Ala Ser Cys Gly Ser Ala Leu Arg Gly Ser
                 85                  90                  95
```

Leu Val Cys Thr Gln Ile Ser Ala Ala Ala Ala Leu Ala Pro Leu Thr
100 105 110

Trp Val Ala Val Ala Leu Leu Gly Gly Ala Phe Tyr Glu Cys Ala Ala
115 120 125

Thr Gly Ser Ala Ala Phe Ala Gln Arg Leu Cys Leu Gly Arg Asn Arg
130 135 140

Ser Cys Ala Ala Glu Leu Pro Leu Val Pro Cys Asn Gln Ala Lys Ala
145 150 155 160

Ser Asp Val Gln Asp Leu Leu Lys Asp Leu Lys Ala Gln Ser Gln Val
165 170 175

Leu Gly Trp Ile Leu Ile Ala Val Val Ile Ile Ile Leu Leu Ile Phe
180 185 190

Thr Ser Val Thr Arg Cys Leu Ser Pro Val Ser Phe Leu Gln Leu Lys
195 200 205

Phe Trp Lys Ile Tyr Leu Glu Gln Glu Gln Gln Ile Leu Lys Ser Lys
210 215 220

Ala Thr Glu His Ala Thr Glu Leu Ala Lys Glu Asn Ile Lys Cys Phe
225 230 235 240

Phe Glu Gly Ser His Pro Lys Glu Tyr Asn Thr Pro Arg His Glu Lys
245 250 255

Arg Trp Gln Gln Ile Ser Ser Leu Tyr Thr Phe Asn Pro Lys Gly Gln
260 265 270

Tyr Tyr Ser Met Leu His Lys Tyr Val Asn Arg Lys Glu Lys Thr His
275 280 285

Ser Ile Arg Ser Thr Glu Gly Asp Thr Val Ile Pro Val Leu Gly Phe
290 295 300

Val Asp Ser Ser Gly Ile Asn Ser Thr Pro Glu Leu
305 310 315

<210> 10
<211> 1330
<212> DNA
<213> Rattus sp.

<220>
<223> rat taste cell polypeptide (TCP) #1 nucleotide sequence

<400> 10
gaattcggca cgagcagagc ctcgtgggtg ggagccaggc tcccctaggc ctgctcctga 60
tctgtctggg tctgccaggc ctctttgcac ggagcattgg ggcaccagag gagaaagtct 120
ccccacattc gggacaacct tccttcacca gcctcctcaa ctctggacag cctcagccca 180
agccagactc tgtgaataat gagttaccag gggttcttcc gaggctcagc gaatctccac 240
aagatggatc tctacccaag ggtggctctg aggtgcctgg tgggcctccc ttctgggggc 300
ggcctccctt ctgggggccg cctcccatgg agtcctggcc ctcagaggac cctcagcaag 360
ggatgtttgc tgatgccgag gaccacttgg agccagttct gccagaagcc ctgtcatacc 420
tttccagaga cagtcctctg cctgaggctt cctctgcgca tgtcaagcaa ccttcaccag 480

aggcttccta ccccctggac acagagcctg aaccacagcc tggttccaga tcgctggaaa 540
ctgaggcaga agccttcgcc cggagcccat tctggtttct tgtccacaaa cttctgcctg 600
gtgtatccgg gaggatccta aatcctggaa catcctgggg aagtggaggg gctggaactg 660
ggtggggaac aaggcccatg ccgtatcctt ctggaatatg gggtagcaat ggtctagtat 720
caggcactag cttggtgggt aatggtcgat atccagcagg catctggggg ggtaatggtc 780
ggtacccagt aggcatctgg gggggtagtg gtcgataccc agcaggcatc tgggggggta 840
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<211> 1263
<212> DNA
<213> Mus sp.

<220>
<223> mouse taste cell polypeptide (TCP) #1 nucleotide
sequence

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aaa 1263

<210> 12
<211> 2525
<212> DNA
<213> Rattus sp.

<220>
<223> rat taste cell polypeptide (TCP) #2 nucleotide
sequence

<400> 12
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<210> 13
<211> 2217
<212> DNA
<213> Mus sp.

<220>
<223> mouse taste cell polypeptide (TCP) #2 nucleotide
sequence

<400> 13
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<210> 14
<211> 1794
<212> DNA
<213> Rattus sp.

<220>
<223> rat taste cell polypeptide (TCP) #3 nucleotide
sequence

<400> 14
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<210> 15
<211> 1758
<212> DNA
<213> Mus sp.

<220>
<223> mouse 1 taste cell polypeptide (TCP) #3 nucleotide
sequence

<400> 15
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<210> 16
<211> 1084
<212> DNA
<213> Mus sp.

<220>
<223> mouse 2 taste cell polypeptide (TCP) #3 nucleotide
sequence

<400> 16
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<210> 17
<211> 1069
<212> DNA
<213> Homo sapiens

<220>
<223> human 1 taste cell polypeptide (TCP) #3 nucleotide
sequence

<400> 17
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<210> 18
<211> 1029
<212> DNA
<213> Homo sapiens

<220>
<223> human 2 taste cell polypeptide (TCP) #3 nucleotide
sequence

<400> 18
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polypeptide amino acid sequence encoded by
degenerate primer used to amplify taste cell
polypeptide (TCP) nucleic acid

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polypeptide amino acid sequence encoded by
degenerate primer used to amplify taste cell
polypeptide (TCP) nucleic acid

<400> 20
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<210> 22
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<400> 22
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<210> 23
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<210> 24
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